THE UNIVERSITY OF ALBERTA

# DISEQUILIBRIUM AS A SOURCE OF INDUCING HIGHER MORAL REASONING IN DELINQUENT BOYS

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled Disequilibrium As A Source Of Inducing Higher Moral Reasoning In Delinquent Boys submitted by Dennis Andrew Ewanyk in partial fulfilment of the requirements for the degree of Master of Education.

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## ABSTRACT

The present study examined the possibility of inducing higher moral reasoning in delinquent boys by creating a state of cognitive disequilibrium. Forty-seven institutionalized delinquent boys were administered stories devised by Kohlberg for assessing moral reasoning. Of the 47 boys tested, 39 (82 percent) were found to use moral reasoning at the preconventional level.

The preconventional subjects were randomly assigned to four treatment groups. The treatments were developed in conjunction with the theoretical requirements deemed necessary if a shift from preconventional to conventional reasoning was to occur. The treatments were: Decentering; Information Conflict (cognitive conflict); Decentering-Information Conflict; and Control. Requirements and procedures for each treatment were discussed.

The duration of the study was two weeks, during which time subjects were exposed to six sessions. A post-test was administered two days after the final session. While no statistically significant changes in moral reasoning could be attributed to any specific treatment, there were moderate trends indicating that the Information Conflict method could prove valuable in future studies.

Two additional factors often associated with changes in moral reasoning, decalage and age, were investigated. Two definitions of decalage, stage mixture and positive variation, were compared to determine which of the two methods was most related to change in moral reasoning. The study found that positive variation tended to relate to change in moral reasoning (p .10). No significant re-

lationship was found between stage mixture and change in moral reasoning. No significant relationship was found between age of the subject and change in moral reasoning, but moderate trends indicated that older boys tended to be more susceptible to change.

The pattern of moral reasoning of delinquent boys was found to be unusual in that reasoning used by these boys could not be easily attributed to a development lag. It was suggested that the American Psychiatric Association classification of Sociopathic Personality disorder of antisocial and dyssocial reactions might be distinguished by the type of moral reasoning exhibited by a delinquent.

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# CHAPTER I

## INTRODUCTION

One of the challenges that social scientists have attempted to meet has been to gain an understanding of how an individual learns to get along with, and to behave like, others in his group or culture. Many factors contribute to successful socialization. One factor is the concept of morality. It is generally accepted that morality is the acquisition and internalization of a set of cultured rules or norms which are conformed to in the absence of external sanctions, and that there are varying degrees of internalized morality from one individual to another. Degree of internalized morality has been of great concern to many theorists (Freud, 1957; Hartshorne and May, 1928; Aronfreed, 1969), who believe that the lack of internalized concepts of right and wrong leads to inadequate socialization.

One of the first attempts at systematic investigation of internalized rules was conducted by Freud (1957). He attributed moral functioning to the super ego, whose task it was to judge the individual's actions. Development of the super ego, as viewed by Freud, stemmed from identification with parents resulting in an internalization of the parents' moral codes and eventually accepting these codes as his own. Deviation from these internalized rules caused discomfort in the form of anxiety and guilt. Behavior of an antisocial nature during adolescence or adulthood might then be attributed to a lack of super ego development occurring during childhood. One cause of antisocial behavior might therefore be insufficient anxiety and guilt. Deviation from internalized rules in this case does not cause discomfort.

Kohlberg (1963b) cites three avenues of research on morality that have evolved from Freud's original works. The first focuses on the amount of guilt after the child actually commits a transgression. The second is concerned with the criterion of intrinsically motivated conformity and is typified by experiments measuring resistance in temptation situation. The third approach stresses the cognitive approach to morality, and attempts to understand the processes of decision making that has led to the moral judgment.

The quality of internalized standards as measured by self-punitive and self-critical reactions after transgression of cultural standards is associated with psychoanalytic theory. Guilt occurs when the moral codes developed through identification with parental authority are not upheld; a conflict inspired by a desire to be like the parents.

The study of guilt in transgression situations by psychoanalysts is one of the most elaborately and systematically investigated concepts. While a comprehensive review of the psychoanalytic concept of guilt is out of place in the introduction of this particular study, three conclusions can be drawn from this research: 1. considerable amounts of guilt are to be found among almost all children and adults, except perhaps psychopaths; 2. guilt may be unconscious, defended against and indirectly expressed; and 3. strong guilt may exist in an individual even though the guilt is ineffective in preventing repeated transgression (Kohlberg, 1963b).

Learning theorists, e.g. Aronfreed (1969) and Bandura and Walters (1963), have also investigated guilt created by transgressions. Learning theory assumes that through principles of reinforcement, a series of good habits will be conditioned and the responses to these habits will be generalized to situations resembling the original ones under which they were learned. Also, anxiety or inhibition of response will generalize to similar situations. It is presumed that most of this learning goes on in the home where parents reward behavior which is considered good and create anxiety for responses they consider bad.

Aronfreed (1969) views the self-criticism aspect of guilt as an anxiety reducing mechanism. Self-criticism becomes associated with the termination of punishment; when a child begins to admit his wrong and offers restitution, the parent ceases the punishment. However Aronfreed's (1969) experimental findings demonstrated some shortcomings in assuming that self-blaming remarks are indicators of conscience. Aronfreed concludes that self-criticism is something more than an instrumental response, and that its place in the phenomena of guilt or moral development depends on its cognitive and evaluative precursors (Kohlberg, 1963b).

The second type of study focuses on moral behavior or conduct where morality, is defined as the behavioral resistance to a temptation situation. Many learning theorists have attempted to find a relationship between resistance to temptation and child rearing practices. Grinder (1964) employed a shooting gallery game as a behavioral measure of resistance to temptation. The child had to falsify his score in order to receive rewards. The results showed no relationship between the behavioral measure of morality, that is, resistance to temptation, and modes of discipline in child rearing practices.

Hartshorne and May (1928) equated conventional measures of morality, such as church attendance and boy scout membership, with behavioral measures of honesty such as the paper and pencil test or completion of school assignments. There were very low correlations among their various measures and they concluded that honesty was more situation-specific than a personality trait.

From Kohlberg's (1963b) excellent review of traditional research on moral development, no clear-cut relationship can be found between moral maturity and antisocial behavior aside from the comment that psychopaths appear to exhibit very little guilt in transgression situations. Research on morality with regard to guilt and resistance to temptation is both inconclusive and inconsistent. Kohlberg (1963b) concluded that a more fruitful approach to morality, as it is related to antisocial behavior, is to utilize a cognitive developmental theory. The cognitive developmental approach evaluates morality through the child's rationalization and justification of moral action in moral dilemma situations. Further discussion of the cognitive developmental approach to moral development will appear elsewhere in this thesis.

## Moral Development

Although Piaget is better known for his work in the area of logico-mathematical concepts, his original research (Piaget, 1948) was directed in a much different direction. Piaget's first attempts at uncovering cognitive thinking processes focused on moral judgment in children and has since been expanded by Kohlberg (1963a, 1969). Kohlberg's approach to moral judgment is based on the cognitive developmental assumptions as outlined by Piaget.

Piaget (1948) contends that all morality consists in a system of rules. The rules governing moral judgment evolve and change as the child matures. The development of moral rules is triggered by the interaction of the child's cognitive structures and his experiences. Therefore the processes underlying moral judgment are self-constructed out of the child's attempt to organize the world around him (Tracy, 1971). Piaget states that morality is an age related stage phenomenon which develops with increasing cognitive growth. Development of morality occurs in two stages. The first stage, occurring from ages 4 to 8, is unilateral respect for adults leading to a heteronomous attitude toward adult rules as sacred. This heteronomous emotional attitude is caused by two cognitive defects. The first defect is egocentrism – the confusion of one's own perspective with that of others. Egocentrism does not permit the child to realize that moral values are relative to various persons or ends. The second defect is that of realism – the confusion of subjective with objective things, thus causing the child to view rules as fixed and external (Kohlberg, 1963b).

The combination of egocentrism and realism contribute to a mode of thought described as "moral realism". Observable characteristics of "moral realism" are: 1. objective responsibility - literalistic evaluation of an act, exact conformity to the rules rather than consideration of intent; 2. unchangeability of the rules; 3. absolutism of value - child believes everyone has the same values; 4. moral wrongness defined by sanction - if punishable, then wrong; 5. duty defined as obedience to authority.

Piaget believed that the development of mutual respect towards other individuals leads to an autonomous regard for rules

(Kohlberg, 1963b). Such rules develop through peer interaction and group agreement and are instruments of co-operative solutions. The child through this socialization process is forced to become less egocentric and more sociocentric (Sigel, 1969). Therefore, the development of mutual respect is attributed to the increasing ability to differentiate one's own perspective from that of others, that is, a decline of egocentrism. Thus, stage 2 of Piaget's moral development is observable by characteristics of: 1. intentionalism - intention of an act; 2. flexibility of rules; 3. relativism of values; 4. moral judgment made independently of sanctions; 5. duty being defined in terms of conformity expectation of peers or equals. Piaget pointed out that egocentric characteristics reappear during adolescence (Hyde, 1970). During this time, the adolescent shows an over-concern for how he appears to others. Elkind (1971) concluded that it is this belief that others are preoccupied with his appearance and behavior that constitutes the "egocentrism" of the adolescent. "Egocentrism" of adolescence tends to diminish by the age of 15 to 16 years, the age at which formal operations become firmly established (Elkind, 1971).

Much of Kohlberg's (1963a, 1969) moral developmental model incorporated Piaget's original work on moral judgment in children. Kohlberg classified his theory as cognitive developmental, meeting all the assumptions of such a theory. A summary of his work will now be undertaken.

The cognitive invariant sequence of social emotional development postulated by Kohlberg is best understood to be the sequence through which moral judgment evolves. Kohlberg has identified three levels of moral judgment, each level having two stages. The following table summarizes Kohlberg's development sequence.

TABLE I

Classification of Moral Judgment into Levels and Stages of Development.

| Level | Basis of Moral Judgment | Stages of Development |
|---|---|---|
| I. Pre-conventional | Moral value resides in external quasi-physical happenings, in bad acts, or in quasi-physical needs rather than in persons and standards. | Stage I: The physical consequences of action determine the goodness and badness regardless of the human meanings or value of these consequences. Avoidance of punishment and unquestioning deference to power are valued in their own right, not in terms of respect for an underlying moral order supported by punishment and authority (obedience and punishment orientation; egocentric deference to superior power or prestige or a trouble avoiding set). |
| | | Stage 2: Right action consists of that which instrumentally satisfies one's own needs and occasionally the needs of others. Human relations are viewed in terms like those of the market place. Elements of fairness, of reciprocity and equal sharing are present but they are always interpreted in a physical, pragmatic way. Reciprocity is a matter of "you scratch my back and I'll scratch yours", not of loyalty, gratitude or justice (naively egocentric orientation, right action is that instrumentally satisfying the self's needs and occasionally others. Naive egalitarianism and orientation to exchange and reciprocity). |

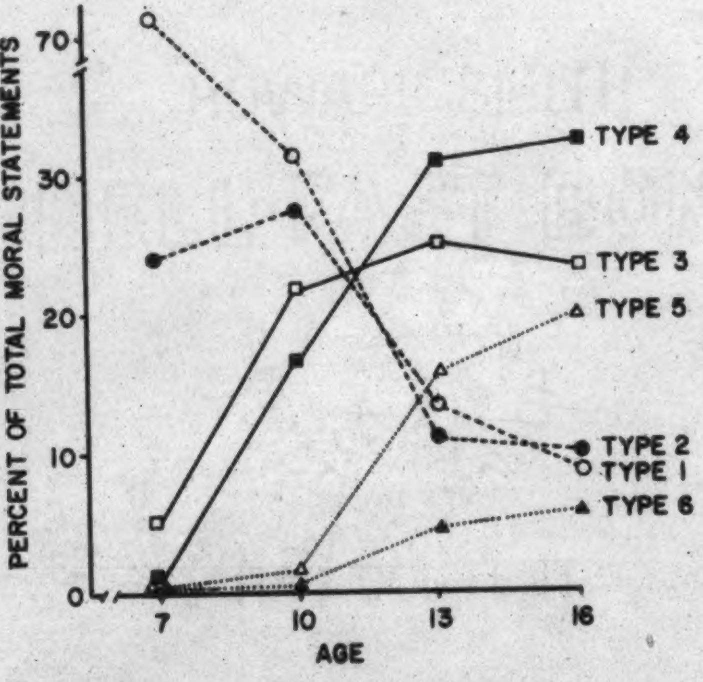
Table I - Continued

| Level | Basis of Moral Judgment | Stages of Development |
|---|---|---|
| II. Conventional | Moral value resides in performing good or right roles, in maintaining the conventional order and the expectancies of others. | Stage 3: Good behavior is that which pleases or helps others and is approved by them. There is much conformity to stereotypical images of what is majority or natural behavior. Behavior is frequently judged by intention, "he means well" becomes important for the first time. One earns approval by being nice (good boy orientation, orientation to approval and to pleasing and helping others). |
| | | Stage 4: There is an orientation towards authority, fixed rules and the maintenance of social order. Right behavior consists of doing one's duty, showing respect for authority and maintaining orientation; regard for earned expectations of others. |
| III. Post-conventional | Moral value resides in conformity by the self to shared or sharable standards, rights, duties. | Stage 5: Right action tends to be defined in terms of general individual rights and in terms of standards which have been critically examined and agreed upon by the whole society (general avoidance of violation of will or rights of others). |
| | | Stage 6: Right is defined by the decision of conscience in accord with self-chosen ethical principles appealing to logical comprehensiveness, universality, and consistency. These are universal principles of justices, of the human rights and of respect for the dignity of human beings as individual persons. |

The above table outlines the invariant sequence of moral development as defined by the stages. The sequentiality across cultures with studies conducted in Taiwan, Great Britain, Mexico, Turkey, and United States with pre-literate and semi-literate samples from Turkey, Mexico (a Mayan group) and Taiwan (an Atayal group) consistently indicate the cultural universality of Kohlberg's moral stages (Kohlberg, 1969). A profile showing the percent of responses across the six stages at three different ages is presented in Figure I.

FIGURE I

Age Trends in Moral Judgment in Middle Class Urban Boys (Kohlberg, 1963a).



These age trends are consistent across cultures as discussed elsewhere (Kohlberg 1969).

In line with the Genevan school and Piaget's cognitive developmental theory, Kohlberg's theory of moral development describes basic development involving basic transformations of cognitive structures. Cognitive structures are defined to be rules for processing information and evolve through the interaction between the structure of the organism and his environment. As a result, the Kohlberg stages can be viewed as cognitive structures (schemata) of action; each stage implying distinct and qualitatively different modes of thinking. The stages, as outlined, also represent an invariant sequence (Kohlberg, 1969; Turiel, 1969) across a number of cultures and it has been suggested that this sequence is universal. Cultural factors may speed up, slow down, or stop development at any stage but cognitive development at one stage does not occur until the preceding stage has developed.

Each of these different and sequential modes of thought form a structural whole characterized by uniquely different thought organization. As a result mere addition of knowledge or information is insufficient to allow a person to develop solutions to social dilemmas characteristic of a higher thought organization or stage; the important factor is the underlying thought organization or structural base (stage) that is being used to process information (Inhelder and Sinclair, 1969; Kohlberg, 1970; Sigel, 1964). Cognitive stages are hierarchical integrations forming an order of increasingly differentiated and integrated structure. The general adaptational functions of cognitive structures are always the same; maintenance of the equilibrium between organism and environment, defined as a balance of assimilation and accommodation. When such a balance cannot be obtained in a functioning cognitive structure, a reintegration occurs evolving into a new higher order cognitive structure (Kohlberg, 1970; Sigel, 1964).

Piaget has stated, as has Kohlberg, that social emotional development is inseparable from the general development of intelligence (Piaget, 1950, 1961) but says little as to the developmental process or sequence. Kohlberg (1969) suggests there is a fundamental unity of personality organization or development termed the ego or the self and that while there are various strands of social development (such as psychosexual development, moral development) these strands are united by their common reference to a single concept of self in a single social world. Social development is the restructuring of the concept of self in its relationship to concept of other people conceived as being in a common social world with social standards. All the basic processes involved in physical cognitions and stimulating developmental changes in these cognitions are also basic to social emotional development. In addition, however, social cognition always involves role-taking (inter-individual action); an awareness that the other is in some way like the self, and that the other knows or is responsive to the self in a system of complementary expectations (Piaget, 1950; Sigel, 1969; Kohlberg, 1969). The direction of social or ego development is also towards an equilibrium or reciprocity between the self's actions and those of others towards the self. The social analogy to logical and physical conservation is the maintenance of an ego-identity throughout the transformations of various role relationships (Kohlberg, 1969).

## Disequilibrium as a Process of Inducing Structural Reorganization

For the purposes of this study it is important to understand the mechanism responsible for allowing changes to occur from a presently operating stage to a higher more integrated stage. The Genevan school's view is that each successive stage of development is a more equilibrated transformation of the functional structures that constitute the organization of its preceding stage. The process of equilibration refers to how the developing organism uses its systems of action to control itself and direct its interaction with the environment and how the actions of the growing organism direct and regulate its own development (Langer, 1969). Piaget states that when a child is in a structural state of disequilibrium, his assimilatory and accommodatory functions act to establish greater equilibrium. This can only result from the performance of those actions that compensate for the perturbation and then, feedback of the information obtained by these acts to the operative mental system. In this way, the child changes his mental actions and structural reorganization of less equilibrated thought processes occurs (Langer, 1969; Greco, 1969). To meet the criteria of structural reorganization, the following must be observed. First, the change is irreversible and cannot be undone, forgotten or replaced. Second, the change is general over a field of responses. Third, the change is a change in shape, pattern or quality of response and not merely a change in frequency or correctness. Fourth, the change is sequential; as postulated by Kohlberg, the invariant moral stages follow in series. Lastly, the change is hierarchical, where later forms dominate or integrate the earlier forms of responses (Kohlberg, 1970).

The key to creating structural reorganization is to create disequilibrium, defined to be an internal state of apparent contradiction and cognitive disorganization which leads to active attempts at reorganizing (Turiel, 1969). The internal state of contradiction, disequilibrium, can be achieved through experiences that disconcert or upset previously established schemata by showing their inadequacies (Greco, 1969). Restated by Sigel (1969), the individual must be confronted with his illogical point of view; a necessary requirement for cognitive growth.

In summary, the hypothesis is that disequilibrium is an initial source of cognitive development and it should be pointed out that external contradictions may not necessarily lead to cognitive conflict and cognitive reorganization, for external contradiction need not imply internal disequilibrium (Langer, 1969).

## Factors Effecting Cognitive Restructuring

If disequilibrium is the initial source of cognitive restructuring, to induce cognitive growth, one merely needs to create disequilibrium. However, secondary factors to the critical state of disequilibrium may well inhibit or facilitate cognitive restructuring. Four such factors will be considered; stage mixture (décalage), chronological age, intelligence and socioeconomic status.

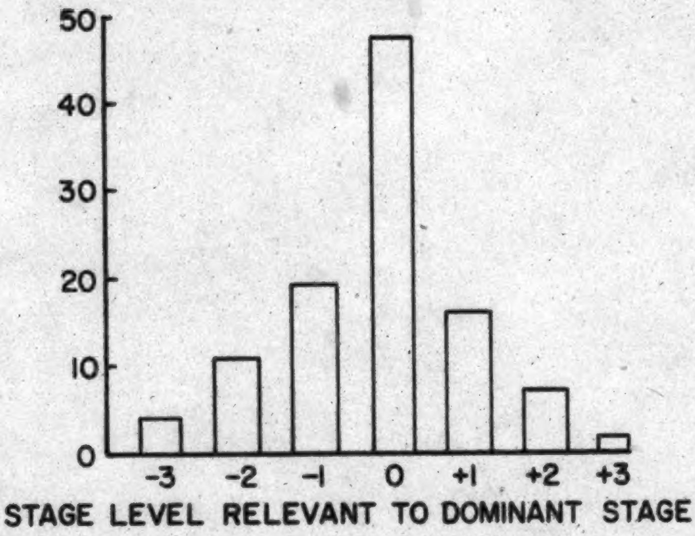
Piaget's developmental stages give the impression that a child functions entirely in one stage and when movement occurs, it occurs from one discrete stage to the next. Studies on acquisition of conservation have shown this not to be the case (Langer, 1969; Elkind, 1968). Elkind (1968) concluded that conservation of mass does not usually appear before ages 7 to 8; conservation of weight does not usually appear before the ages of 9 to 10; and conservation of volume does not usually appear before age 11. Décalage (stage mixture) exists when a child exhibits stage usage representative of two or more different stages (Flavell, 1963).

Stage mixture (décalage) is also observed in Kohlberg's moral development model. Virtually all subjects given a moral judgment test obtain scores in several stages rather than on one single stage (Turiel, 1969; Kohlberg and Kramer, 1969). Stage mixture could be attributed to the insensitivity of the Kohlberg testing instrument. Turiel (1969) points out that this single factor cannot account for all the variation found in a moral judgment score.

The response pattern normally found in moral judgment scores is one where a dominant stage, with the highest percentage usage appears; adjacent stages have the next highest percentage usage, followed by those stages which are one stage removed from the dominant stage as having the lowest percentage usage. Figure 2 is a graphic representation of this.

FIGURE 2

Profile of Moral Stage Usage on Kohlberg's Moral Judgment Interview (from Rest, Turiel, and Kohlberg's Study, 1969).



The theoretical implications of stage mixture, as discussed by Turiel (1969), reflect to some extent, the nature of the developmental process. Simply stated, stage mixture is necessary if change is to occur. High stage mixture has been associated with periods of developmental change or when reintegration is occurring. After reintegration, stage mixture declines thus reflecting a stabilization process at the new level. In summary, the transitional period is characterized by increasing mixture, decreasing of stage mixture is characteristic of a stabilization process (Turiel, 1969). Few studies have attempted to determine if stage mixture is an antecedent for inducing cognitive growth. A study by Tracy (1971) found stage mixture was not associated with change in morality score.

The second factor, chronological age, has been associated with expectancy of developmental level, as in the study by Elkind (1968) discussed previously. Stage of moral development and percentage of responses associated with different stages have also been related to an age trend.

Reviewing Figure 1, it would be expected that at age 10, a substantial increase in stage 3 and 4 usage should be expected. It would seem logical to expect that if change in stage usage had been delayed by a number of years, that stabilization or crystallization would tend to occur. In fact, one would suspect that the greater the developmental lag, the greater the crystallization; therefore the less chance of inducing cognitive growth. Turiel (1969) states that if an older child at the lower stage (stages 1 and 2) is fixated in his mode of thought, it is unlikely that he could be readily influenced. In summary, given a population at a fixed stage, there is less likelihood that change will occur in older individuals who have experienced this mode of thought over a longer period of time.

Kohlberg (1969) presents evidence for intelligence as a necessary but not sufficient, condition for achieving higher levels of moral judgment. The general trend of I.Q. and moral maturity suggests that if one is in the below average range of I.Q., a below average moral maturity score would be expected. However, this trend does not hold when above average I.Q. is compared with moral maturity. No relationship (r=0.16) is found between the I.Q. and moral maturity in the above average group. This suggests children who are above average in I.Q. are equally likely to be low or high in moral maturity (Kohlberg, 1969). Thus I.Q. appears to be an important factor in cognitive restructuring but it is clearly not the only one. Tracy (1971) found no association between I.Q. and change in moral maturity, lending support to the above discussion.

Socioeconomic status is a variable often linked with moral development. The stereotype view that parents of a high socioeconomic status compared to their low socioeconomic status counterparts used different modes of child rearing. The general contention is that parents in the lower socioeconomic class and in authoritarian subcultures tend to use their authority in a way that promotes unquestioning acceptance of adult-imposed rules and a letter-of-the-law concept of morality (Leckona, 1969). The generalization does not hold true in studies that control for socioeconomic status (Tracy, 1971). Lower class children were found to exhibit moral maturity scores as high as their upper class counterparts. The authoritarian restrictiveness attributed to low socioeconomic groups is perhaps misplaced. Authoritarianism is more a personality characteristic, not specific to low socioeconomic class. Supporting evidence for the above was found by Tracy (1971) and Hudgins (1972). Tracy found no association with socioeconomic status and change in moral maturity scores.

Cognitive conflicts, for the purposes of inducing cognitive growth, are specific to the developmental level of the individual. In the Kohlberg model, the confrontations that are required to cause re structuring are different for each stage of development. Therefore it is important to evaluate the transitional requirements that will induce stage growth. Specific to this study is the structural level that delinquents exhibit. Once a moral level is identified, the factors specific to bridging the gap to the next stage will be elaborated upon.

Delinquency

Freud's psychoanalytic theory has equally been applied to delinquency as it was to understanding moral development. Moore's (1960) discussion of delinquency, as viewed by psychoanalytic, psychological, sociological and criminological theory, indicates that theoretical understanding of the problem is as varied as the theorists. Psychoanalytic theorisfs such as E. H. Erikson and Redland Wineman conceptualize delinquency in such terms as identity diffusion and delinquent ego. Sociologists such as Durkheim and Merton view delinquent behavior in the framework of "Anomie" or normless behavior. Criminologist, E. H. Sutherland's theory of differential association offers still another alternative.

E. H. Erikson's model of personality development is the most well known model that attempts to view personality development via stage development. Erikson views personality of development occurring from infancy to mature age, identifying eight critical ages. Within each age the individual faces a critical personality development; the adolescent is faced with identity versus identity diffusion (Erikson, 1950, 1959), this being the crisis that will determine delinquent behavior. Ego identity is achieved when there is a coalescence within the personality of how one sees himself and how well this corresponds to how others see him. Identity diffusion results when this reality vision of himself in relation to others does not occur, resulting in a transitory disturbance leading to a malignant episode, a series of delinquencies.

Cognitive developmental theory, and specifically Kohlberg's moral developmental theory has not addressed itself specifically to the problem of delinquency. However, characteristic responses specific to moral stages have been clinically observed as being the major response repertoire of delinquents (Hudgins, 1972).

Kohlberg (1958) found that the level of moral development of delinquent boys was substantially lower than non-delinquent boys. Kohlberg's findings have been substantiated by the findings of Fodor (1972). Fodor compared the Moral Judgment scores of forty non-delinquent subjects, matched for age, race, verbal intelligence and amount of education received by the mother. He found that delinquents received substantially lower Moral Judgment scores (significant at the .001 level) than did non-delinquents. A study by Freundlech (Kohlberg and Turiel, 1971) found that the large majority (83 percent) of 15 to 17 year-old working class delinquents scored in the preconventional level of moral judgment while only 23 percent of non-delinquent working class adolescents were preconventional.

Hudgins (1972) investigated the moral reasoning of adolescent delinquent and non-delinquent boys and their mothers. Five White and five Negro delinquent boys and their mothers and a control group matched for age, race and I.Q. were assessed on Kohlberg's moral reasoning scale. It was found that the delinquent boys used lower stages of reasoning than their non-delinquent counterparts (significant at the .10 level). It was also found that a similar trend was found when mothers of delinquent boys were compared with their counterparts. Two conclusions were drawn from the study. First, the egocentric orientation of the delinquent who conceptualizes the world in terms of how it satisfies his needs is consistent with the cognitive orientation found in Kohlberg's premoral stages which emphasize the evaluation of a situation in consequences to the self. Secondly, moral reasoning is seen by Kohlberg and his colleagues to develop through cognitive conflict where the child's ability to make moral judgments grows as he tries to assimilate reasoning which is higher than his own. Mothers of delinquents with the lower stage of moral reasoning do not have available to them the cognitive resources to stimulate their sons' cognitive growth in moral development (Hudgins, 1972). In conjunction with Hudgins' last statement, Fodor (1969) found no significant difference in Moral Judgment scores between Negro and White samples, but did find significant differences between subjects whose mothers were better educated.

## Defects of Preconventional Thought

From the minimal amount of research on moral reasoning of delinquents, one observation becomes quite clear; in the majority of cases the moral reasoning of the delinquent boy is centered at the preconventional level. The cognitive defects of preconventional thinking must now be looked at. These defects must be overcome in order for restructuring to occur at a higher level. In other words, for restructuring to occur at a higher level, the inadequacies of the present cognitive processes must be overcome.

### 1. Egocentricity versus Sociocentricity

Delinquents characteristically score at the preconventional level of moral development. Characteristic of this developmental level is egocentrism, the confusion of one's own perspective with that of others leading to an inability to see moral value as relative to various persons or ends (Kohlberg, 1963a). Early adolescence is identified by Piaget as a time of decentration, where development of genuine social reciprocity leads to Kohlberg's stage 3 orientation (Piaget, 1950; Laurendeau and Pinard, 1962). Therefore the confrontation that occurs via decentration may lead the individual from egocentrism to sociocentrism (Sigel, 1969) and thus from stage 2 to stage 3 moral judgment. Role-taking in social content requires the individual to decenter, that is, to react to the other as someone like the self and to react to the self's behavior in the role of the other (Feffer, 1959; Kohlberg, 1969). Studies by Feffer (1959, 1960) concluded that older children show a greater degree of balanced decentering than do younger children in their structuring of impersonal cognitive tasks as well as in their role-taking behavior. Furthermore, it was shown that there is a concordance between degree of balanced decentering as evidenced in taking different social perspectives.

A more recent study (Selman, 1969) hypothesized that in middle childhood the cognitive ability to shift social perspective (role-taking) is related to higher levels of moral judgment. Preconventional moral thinkers and conventional moral thinkers took part in role-taking tasks as devised by Flavell (1968). The significant relation of the role-taking scores to the moral judgment scores across the age range of 8 through 10 years, with intelligence, age, and sex differences controlled, supported the hypothesis that greater ability to shift social perspective (role-take) is related to higher levels of moral judgment in middle childhood. Selman concluded that in order for a child to be able to reach a higher level of moral judgment, he must be skillful in evaluating the views of all other participants' viewpoints to his own system of values.

A study by Tracy (1971) attempted to induce cognitive restructuring by implementing a treatment program requiring subjects to role-play to moral reasoning one stage above their initial stage. Striking differences were found for the effectiveness of the treatment for subjects at different levels of moral development. Subjects at the preconventional level of morality shifted upward more than did subjects at the conventional level. The results suggest role-taking (decentering) facilitated integration of one stage higher moral reasoning at the preconventional level more than it did at the conventional level. This finding is consistent with the premise that decentering is necessary in the process of development from egocentrism to sociocentrism or from preconventional moral thought to conventional moral thought. Stuart (1967) further states that given practice in the ability to decenter, a child might become better prepared for future cognitive restructuring.

### 2. Cognitive Conflict: Stage 2 versus Stage 3

Decentering for the purposes of inducing preconventionals to shift to conventional thinking is suggested by the above theory. However, it would seem that a great deal of benefit may be achieved from information exposure at the conventional level. As suggested by Hudgins, the lack of exposure to conventional thinking prevents delinquents from reaching this higher level. In Tracy's (1971) study, the second factor to role-taking was exposure to moral thinking one stage above present functioning. Cognitive conflict of information, that is, preconventional solutions to moral dilemmas conflicting with conventional solutions to moral dilemmas, is recognized as being a second factor in the induction of disequilibrium.

Principles of information conflict, information contradiction or cognitive conflict for purposes of inducing disequilibrium have been used in attempting to develop Piagetian conservation (Smedslund, 1961a, 1961b, 1961c; Inhelder and Sinclair, 1969; Strauss and Langer, 1970; Inhelder et al.,1966). Recently, studies using information conflict (cognitive conflict) have also been used in attempts to induce moral development (Turiel, 1966; Tracy, 1971; Beck, Sullivan and Taylor, 1972). A study by Rest, Turiel and Kohlberg (1969) attempted to determine preference and comprehension of moral judgments above their dominant stage. The study was summarized as follows: children generally preferred concepts one stage above their own; and moral reasoning two stages above their own was more difficult for subjects to comprehend than thinking one stage above.

Turiel (1966) exposed 44 boys, ages 12.0 to 13.7 to an experimental condition of moral reasoning. Three treatment groups; one stage above, two stages above, and one stage below, their dominant stage of moral reasoning were compared with a control group. It was found that the group exposed to moral reasoning one stage above their dominant stage exhibited the greatest upward shift in moral reasoning.

A similar study was conducted by Blatt (Kohlberg, 1969); classroom discussions of moral dilemmas, where stage 3 children argued against stage 2 children, then stage 3 against stage 4, and finally the experimental stage 5 against stage 4. The effects of this procedure raised 45 percent of the children up one stage (as compared to 8 percent in the central group), and 10 percent up two stages. A majority of stage 2 subjects moved through stage 3 to stage 4, while little effect was noticed in movement from stage 4 to stage 5. Two factors absent in Turiel's (1966) study were cited as having contributed to the higher percentage shift in Blatt's study. First, discussions were carried out over a greater time period - three months in Blatt's study versus two weeks in Turiel's. Second, the procedure differed in that greater cognitive conflict was induced through disagreement, suggesting contradiction and discrepancy at one's own stage is necessary for reorganization to occur at the next stage.

A study by Beck, Sullivan and Taylor (1972) attempted to increase moral reasoning of grade eleven students attending a Toronto high school. The students were involved in a four month course centering on discussion of ethical problems and principles at the postconventional level. Post-tests, administered immediately after completion of the course, revealed no significant differences between experimental and control groups. A follow-up post-test, administered one year later, did show significant usage of postconventional moral thinking, in comparison with a control group that remained unchanged throughout (Beck, Sullivan and Taylor, 1972).

A summary of the preceding discussion leads to a number of findings. First, the percentage of preconventional thinkers in a delinquent population has been quoted as being in the range of 80 percent whereas in the normal population for a comparable sample the incidence of preconventional thinkers is approximately 20 percent. Second, preconventional delinquents at ages 14 to 16 exhibit a developmental lag of approximately 4 to 6 years. Third, two factors essential for inducing conventional thought have been cited; decentration and information conflict (cognitive conflict).

A number of unanswered questions arise from the above points. First, can the developmental lag exhibited by delinquents be eliminated via a treatment program designed to create disequilibrium? Second, is it necessary for the factors of decentration and information conflict to operate concurrently or will one factor induce the disequilibrium necessary for structural reorganization? It is hoped that the present study will answer these questions.

# CHAPTER II

## METHODS

### The Present Study

The purpose of this study is to investigate the level of moral development of delinquent boys using Kohlberg's cognitive developmental model. By investigating the cognitive processes of decision making used by delinquent boys, it is hoped this approach will lend itself to a better understanding of the problem of delinquency. Having identified the cognitive processes used in moral reasoning, the theoretical requirements for further moral development will be investigated. Lastly, taking into account these findings, a treatment program will be implemented in an attempt to induce cognitive growth.

On the basis of the previous review and discussion, with the minimal amount of published literature available on Kohlberg's moral reasoning as it is related to delinquency, no formal hypotheses will be made. Expectations are that: 1. a high percentage of the delinquent boys tested will exhibit preconventional thought as their major form of cognitive moral reasoning; 2. of the three treatment programs devised; decentering, information conflict (cognitive conflict) and decentering-information conflict, decentering-information conflict will result in creating the greatest change in moral judgment followed by information conflict and then decentering.

### Subjects

Forty-seven delinquent boys residing at the Alberta Youth Development Center, a provincial correctional institution located in Edmonton, Alberta, were made available for the study. The Alberta

Youth Development Center is a co-educational institution with a capacity of approximately 65 residents. The 47 boys represented the total male population of the institution at the time of the study. The age of the subjects ranged from 13.9 to 16.5 years; a slightly larger range than Hudgin's (1972) study, which used a range of 14.5 to 16.1 years. The average age of the subjects was 15.4 years comparable to Kohlberg's original delinquent group which was 15 year olds. All subjects had been sentenced to the institution through juvenile court; the delinquent acts varied as did the number of previous court appearances and convictions.

The research was explained to the boys as an attempt to develop a new school curriculum and it was hoped that their co-operation would aid in the development of new approaches to teaching English and communication arts. Within this frame the research was incorporated into the regular school program and all subjects were required to participate. Exceptions to this requirement were made in cases where subjects had difficulty in coping with the materials in the experiment.

No attempt was made to control for such factors as intelligence and socioeconomic status, due to limitations of sample size. Tracy (1971) found no association between intelligence and socioeconomic status and change in morality score after treatment.

## Moral Judgment

The level of moral judgment can be assessed by the administration of Kohlberg's moral dilemma stories. Two methods of administration, interview or pencil and paper, require the subject to respond to hypothetical social dilemmas; the responses call for elaboration and justification of choices made by the subject. The present study made use of the pencil and paper version with the interview method used with only one subject. Kohlberg has constructed a series of ten stories, but as Tracy (1971) and Hudgin (1972) have pointed out, Kohlberg advises that four stories provide an adequate assessment of the child's level of moral reasoning. The present study uses four stories to assess moral judgment in a pre-test and four different stories for the post-test as recommended to Tracy (1971) by Kohlberg. The pre and post-tests appear in Appendices D and E respectively.

An illustration of a social dilemma, taken from the post-test, along with characteristic responses of delinquent boys is presented below.

## Kohlberg's Story Number III

In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $200 for the radium and charged $2,000 for a small dose of the drug. The sick woman's husband, Heinz went to everyone he knew to borrow the money, but he could only get together about $1,000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it". So Heinz got desperate and broke into the man's store to steal the drug for his wife.

Responses

Q. Should Heinz have done that? Was it actually wrong or right? Why?

A1: No, wrong because he could go to jail then couldn't pay for it at all.

A2: Wrong, because the woman would have probably died anyways.

A3: No, he could get caught easily because he had already asked the druggist for it.

A4: Yes, he should have because he needed it or his wife would die.

A5: It was wrong and right. It was wrong to have broken in but it was right to save his wife's life.

A6: Yes, because the man was being greedy and his wife was dying.

A7: No, he should have gone to the authorities.

A8: I think he was right because he loved his wife and wanted to help her.

Responses to each story can be scored in two ways; the general criterion for stage responses has been outlined in Table I. The first method can be described as sentence coding, where every sentence is assigned a stage score as prescribed by the detailed Issue Manual. The second method is Global rating, where the principle rationale in the child's response is given a stage score. The present study used the method of sentence scoring, a more precise analysis of responses. Scoring was done by a trained rater.

A morality score is obtained by weighing each story three points. If the subject's stage score is of a single type, all three points are assigned to that stage. If the responses to a story are of mixed type, two points are assigned to the dominant stage while one point is assigned to the minor stage. In this way a sum is obtained of frequency of stage responses across all four stories. The percentage of responses at each stage is then calculated. A weighted percentage is calculated by multiplying the percentage of responses at a particular stage by the stage number. The morality score is the sum of the weighted percentages. An example of the scoring procedure for a four story protocol is presented in Table 2.

TABLE 2

Sample of Scoring Procedure for Kohlberg Moral Maturity Score.

| Story Number - | III | IV | VIII | IX | Sum | Percentage | Weighted Percentage |
|---|---|---|---|---|---|---|---|
| Stage 1 | | | | | | | |
| Stage 2 | 2 | 3 | 1 | 3 | 9 | 75 | 150 |
| Stage 3 | 1 | | 2 | | 3 | 25 | 75 |
| Stage 4 | | | | | | | |
| Stage 5 | | | | | | | |
| Stage 6 | | | | | | | |

Total Morality Score = 225

From Table 2 the subjects' responses for stories IV and IX are of one type, that being stage 2 thinking and therefore receives three points. In story III the subjects' dominant response was at stage 2 with a minor stage 3 response and scores are assigned two points for stage 2 and one point for stage 3.

## Procedure

A Kohlberg moral judgment test was administered to the entire delinquent male population residing in the institution. All boys scoring in the preconventional level (Stages 1 and 2) were candidates for the study. Any boys having a moral judgment score of higher than 265 were excluded from the study. These preconventional thinkers were then randomly assigned to one of four treatment groups. As discussed in Chapter 1, the treatments central to inducing restructuring from preconventional to conventional thinking were: decentering (role-taking), information conflict (cognitive conflict), both decentering and information conflict and control.

Operationalization of the above treatments were as follows:

## I. Decentering (Role-taking)

A characteristic of a preconventional thinker is egocentricity, the person viewing himself as central in all social situations. By decentering, making the person experience another person's point of view, it has been suggested that a state of disequilibrium will result, thus resulting in restructuring that facilitates role-taking. Sociocentrism is a characteristic of conventional thought and an important criterion for Kohlberg's stage 3 moral judgment. The decentering exercise takes the form reported in Feffer's original work (Feffer, 1959, 1960). In a one to one situation a background scene is presented along with three characters. The subject is required to tell a story about the scene as if he were any one of the characters in the story. Upon completion of the story, he is asked to retell the initial story from the viewpoint of first one of the other characters and finally from the point of view of the remaining character. Feffer's scenes and characters are based on Schneidman's Make A Picture Story (MAPS). Feffer's Role Taking Task (RTT) differs in that scenes and characters were altered to eliminate "unusual, grotesque, and highly suggestive background and figures" (Feffer, 1959). As Feffer's RTT was unavailable for experimental use, Schneidman's MAPS scenes and characters were used. The quality of the MAPS materials is poor, in that some scenes are inappropriate and some characters are questionable. However, scenes and characters were screened for appropriateness and were found to be quite adequate for this study. Scenes and characters from MAPS used in this study are listed in Appendix A.

2. Information Conflict (Cognitive Conflict)

A second method of creating disequilibrium and thus stimulating structural reorganization is cognitive conflict. Studies (Rest, Turiel, Kohlberg, 1969; Kohlberg, 1969) have indicated that the most effective method of stimulating restructuring is to confront the subject who has replied to a social dilemma at a specific stage, with a solution one stage above his own. The experimental exercise for cognitive conflict will take the form of group discussions. The groups consist of five preconventionals, one conventional peer and two conventional experimenters. Group size is limited to eight as recommended by Foulkes and Anthony (1965). A social dilemma is presented to the group, the group is then required to resolve the dilemma and come to a mutual understanding. The conventional peer is one who has scored at the conventional level of moral judgment on the pre-test and no attempt was made to identify him as different from any of his peers. The roles of the two conventional adults in the groups were specified. One adult was to act as moderator and chairman, and not required to vote on the outcomes of the social dilemma. Further duties were to identify specific arguments being made and contrast them with higher stage arguments. The role of the second adult was to participate as a group member, representing arguments at the conventional level, in either the pro or con, depending on how he could best engage the group in discussion. The social dilemmas used for discussion are independent of Kohlberg's dilemmas used in assessing moral level. Three stories,

stories 1, 2, 3, appeared in Tracy's (1971) study while stories 4, 5, 6, were added for the present study. All stories used in the group conflict situations appear in Appendix B.

3. Decentering-Information Conflict (Role-conflict)

The third treatment, role-conflict, is an attempt to combine the decentering experience along with insuring that the subject is exposed to thinking at the conventional level. In a one to one situation a social dilemma is presented to the subject. The social dilemmas are identical to the ones used in the cognitive conflict treatment. The subject is asked to assume the role of the main character in the social dilemma and to resolve the situation that he is role-taking. Upon completion of his resolution he is told that the main character in the story wishes to seek advice from two friends. The subject is asked to assume the role of one of the friends being asked for advice and at this point is given a stage 3 response to read. The typed response given to the subject first is the response opposite his own response, i.e. if the subject initially responded "yes, you should drop the charge", as in story 1, he would be given the "no" stage 3 response first. Upon successfully role-taking the advice of friend one, the subject assumes the role of friend two and is given the remaining stage 3 response. Finally the subject is again asked to assume the role of the main character and is asked to give a final decision accompanied with the reasons for the decision. The stories, along with the advice read by the subjects, appears in Appendix C.

4. Control Group

The control group in the study did not take part in any special treatment. These subjects functioned in a normal fashion within the daily structure as prescribed by the institution.

Each treatment group was exposed to six treatments. The six treatments were completed in two weeks, with post-testing conducted on the first day of the third week. Five experimenters took part in the study. To minimize any experimenter effect, all experimenters had equal exposure to all treatment groups and all subjects.

## Design and Statistical Treatment

The design of the present study takes the form of Campbell and Stanley's (1971) pre-test - post-test control group design.

After pre-test criteria are defined and subjects identified, equivalent groups are achieved by randomization of subjects. The design for the present study takes the following form:

$$\begin{array}{cccc} R & O_1 & X_1 & O_2 \\ R & O_3 & X_2 & O_4 \\ R & O_5 & X_3 & O_6 \\ R & O_7 & & O_8 \end{array}$$

R in the above diagram indicates that all subjects are randomly distributed into one of four groups. $O_1$, $O_3$, $O_5$, and $O_7$ indicate observations on the pre-test; similarly $O_2$, $O_4$, $O_6$, and $O_8$ indicate observations on the post-test. $X_1$, $X_2$, and $X_3$ indicate treatment groups, the absence of X indicates the control group. The above design was chosen because of internal validity factors such as history, maturation testing, instrumentation, regression, selection and mortality are controlled (Campbell and Stanley, 1971). External validity of interaction of selection and X (difficulty in obtaining subjects), reactive arrangements (laboratory creating a higher-order problem-solving set) were felt to be controlled in the study.

Statistical analyses were performed primarily on scores derived from the sentence coding method leading to a morality score. Morality scores provide a number or single score ranging from 100 to 600 which are readily analogous to the original stage scores. This score also allows for cases of stage mixture to be represented as a single number.

The argument can be raised that since Kohlberg's theory is a stage theory it does not meet the assumptions of unidimensionality and equal intervals which are necessary to properly apply parametric statistics. Hudgin states that despite this fact, Kohlberg strongly implies, but does not explicitly state, that his moral judgment scale meets the assumptions of parametric statistics (Hudgin, 1972). As a result this study employs an analysis of covariance technique on the data, the pre-test being the covariate (Campbell and Stanley, 1971). Despite the fact that the pre-test criteria are applied, pre-test scores for the four groups differed, necessitating the use of covariate techniques to equalize these differences (Cochran, 1957; Ferguson, 1971).

A one way analysis of covariance was performed on results of the treatments. In addition, a one way analysis of covariance on pure versus stage mixture was performed as was a one way analysis of covariance on young versus old subjects.

# CHAPTER III

## RESULTS

Of the 47 delinquent boys tested on the Kohlberg moral judgment test, 8 boys scored at the conventional level while 39 scored at the preconventional level. The first expectation is met, in that 82.9 percent of the delinquent population tested scored at the preconventional level. The 39 subjects were randomly distributed into one of the four possible treatment groups. Ten subjects were placed into the Decentering, Information Conflict, and Decentering-Information Conflict group while the Control group consisted of the remaining 9 subjects. During the course of the 2 week treatment period, 3 subjects were lost; 1 subject from each of the Decentering, Information Conflict, and Decentering-Information Conflict groups. Therefore, the following analyses were performed on four groups, each group consisting of 9 subjects giving a total sample of 36.

A one way analysis of covariance, with the pre-test morality scores as the covariate and the post-test morality scores as the dependent variable was performed on the treatment groups. Table 3 presents the results.

TABLE 3

Analysis of Covariance on Treatments Covarying Pre-test out of Post-test.

| Treatments | Adjusted Means | DF | F | P | |
|---|---|---|---|---|---|
| Control | 225.12 | (3,31) | .59 | .63 | N.S. |
| Decentering (role) | 247.82 | | | | |
| Information-Conflict | 248.41 | | | | |
| Decentering-Conflict | 241.19 | | | | |

From the table a trend may be identified. The group, Information Conflict scored virtually equally high on the post-test with the Decentering group, followed by the Decentering-Conflict group and lastly the Control group.

The question of parametric statistics being applicable in the present study was discussed in Chapter 2. In order to verify the use of parametric statistics, a non-parametric technique, the Kruskal-Wallis one-way analysis of variance by rank (Siegel, 1956; Ferguson, 1971) was applied to the above data. The results were found to be consistent with the above table.

Because the Information-Conflict cell consisted of two groups of discussions on moral dilemmas, these separate groups are considered in Table 4.

TABLE 4

Analysis of Covariance Separating the Two Information Conflict Groups (Covariate-Pre-test).

| Treatments | Adjusted Means | DF | F | P | |
|---|---|---|---|---|---|
| Control | 224.58 | (4,30) | .50 | .74 | N.S. |
| Decentering (role) | 247.84 | | | | |
| Information-Conflict A | 256.87 | | | | |
| Information-Conflict B | 241.77 | | | | |
| Decentering-Conflict | 241.63 | | | | |

From Table 4 the two Information Conflict groups did not change by the same amount. Despite the fact that both groups were handled in a similar manner, it would appear that group dynamics within each group were different.

As the results from Tables 3 and 4 indicate, there is no significant differences between the treatment groups; however a trend can be seen. The trend indicates that Information Conflict Group A changed the most followed by the Decentering, Information Conflict Group B, the Decentering-Conflict, and lastly the Control.

Additional Analyses

Change in moral judgment scores is not readily attributed to the different treatment groups. As a result two additional factors, stage mixture and age, both discussed earlier in this study, were investigated.

From the protocol, the degree of stage mixture can be determined. Two methods of identifying stage mixture were used in the present study. The first method is based on Kohlberg's findings regarding percentage distribution of responses. A pure type is considered to be a subject who uses a single stage of reasoning 75 percent of the time. It was found that this requirement was too stringent, therefore for the purposes of this study a pure type is defined as a subject who uses a single stage of reasoning 60 or more percent of the time with no more than 20 percent of the remaining responses at any other one stage. For example a person scoring 20 percent stage 1, 60 percent stage 2, 20 percent stage 3 would be considered "pure" whereas a person scoring 10 percent stage 1, 60 percent stage 2, 30 percent stage 3 would be considered as mixed.

The second method of determining stage mixture is by the calculation of a variation score (Turiel, 1969). A variation score is computed by multiplying the percentage of a subject's responses on a stage by the number of stages separating that stage from the modal stage and then summing these products. The modal stage is that stage receiving the highest percentage of responses. The present study employed the variation score, but the variation score used was the score calculated above the modal score. This can be referred to as a positive variation score and indicates the stage mixture occurring above the modal stage. It is felt that a positive variation score is a better predictor of change than a variation score using both positive and negative stage mixture. A variation score using both positive and negative stage mixture is similar to the first method described. Turiel (1969) indicates that when change has occurred, the newly formed stage becomes the modal stage with stage mixture occurring most at the stage from which the subject has evolved. If a variation score considering stages below the modal stage were calculated, a high variation score would result. However this negative variation score (negative referring to stages below modal stage) would not be a good predictor of future change, as it is unlikely that since a change has recently occurred that another change is likely to occur. Subjects with high variation scores versus subjects with low variation scores were defined as follows. A variation score of 20 or less were subjects classified in the low variation score group. The value of 20 is consistent with the first method of terming pure and mixed types, that is, any person in the low variation score group could not have scored 20 percent or more in any stage above his modal stage.

Tables 5 and 6 summarize the results.

TABLE 5

One Way Analysis of Covariance on Pure Versus Mixed Stage Responses (Covariate—Pre-test).

| Groups | Adjusted Means | DF | F | P | |
|---|---|---|---|---|---|
| Pure | 233.09 | (1,33) | .47 | .50 | N.S. |
| Mixed | 243.53 | | | | |

Stage mixture as defined in method one is not significantly associated with change in morality score.

Table 6 presents the results of positive variation score as it is associated to change in morality scores.

TABLE 6

One Way Analysis of Covariance on Positive Variation Score (Covariate-Pre-test).

| Group | Adjusted Means | DF | F | P | |
|---|---|---|---|---|---|
| Low Positive Variation Score | 222.33 | (1,33) | .34 | .07 | N.S. |
| High Positive Variation Score | 248.69 | | | | |

High positive variation scores now approach significance and are associated with changes in morality scores, though falling short of the desired significant level of .05.

The second factor, age, was investigated on the dimension of young versus old boys. The age range of 13.9 to 16.9 years was divided in half; the young age group ranged in age from 13.9 to 15.1 years while the older group's age range was from 15.2 to 16.5 years. As discussed, Rest, Turiel and Kohlberg (1969) concluded that older low-stage subjects (stages 1 and 2) have probably become fixated or crystallized at the lower stages, and over the years, have become insensitized or rejecting of higher stage thinking thus restricting future moral development. Table 7 presents the findings of age in relation to change in morality scores.

TABLE 7

One Way Analysis of Covariance on Young Versus Old Delinquent Boys and Change in Morality Scores (Covariate-Pre-test).

| Group | Adjusted Means | DF | F | P | |
|---|---|---|---|---|---|
| Young Boys | 229.08 | (1,33) | .83 | .37 | N.S. |
| Old Boys | 243.94 | | | | |

Though a significance level of .05 is not obtained, the trend indicates that older boys changed more readily on the post-test than did younger boys.

A step-wise multiple regression procedure to predict post-test scores using the factors of positive variation score, age, and pre-test score was undertaken. A multiple regression procedure was chosen because all three factors were continuous and full use of this data could be made in predicting post-test scores. The process begins with the choice of a dependent variable (post-test) for which maximum prediction is desired. A correlation matrix is generated which relates all variables. Finally, starting with the single variable which predicts most highly the dependent variable, a regression equation is formulated. The procedure then searches the correlation matrix for the next variable most highly correlated, to the dependent variable and a second regression equation, with the first variable accounted for, is formulated. The correlation matrix of the above factors and the post-test scores appears in Table 8.

## TABLE 8

Correlation Matrix For Regression Problem.

| | | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| Positive Variation Score | 1 | 1.00 | .09 | .34* | .26 |
| Age | 2 | | 1.00 | .13 | .18 |
| Post-test | 3 | | | 1.00 | .35** |
| Pre-test | 4 | | | | 1.00 |

** $p < .05$
* $p < .10$

The two factors, pre-test and positive variation score, are the most powerful predictors of post-test scores. Table 9 summarizes the step-wise regression performed.

## TABLE 9

Cumulative Step-Wise Regression for Pre-test and Positive Variation Score.

| | Regression Weight | F | P | Standard Error of Predict. Y | Constant |
|---|---|---|---|---|---|
| Pre-test | .36 | 4.75 | .04 | | |
| | | | | 40.65 | 147.60 |
| Positive Variation Score | .22 | 2.77 | .08 | | |

The regression equation for predicting post-test scores becomes:

post-test = .36 (pre-test) + .22 (positive variate score) + 147.60

with the standard error of prediction being 40.65.

# CHAPTER IV

# DISCUSSION

## Moral Reasoning of Delinquents

One objective of the present study was to investigate the level of moral reasoning of delinquents. Freundlich found that the percentage of preconventional thinkers within a delinquent population was extremely high (over 80 percent) as compared to a matched non-delinquent population (Kohlberg and Turiel, 1971). Furthermore, Kohlberg (1963a) and Hudgins (1972) state that percent usage of different levels of moral reasoning is abnormal, in that delinquents exhibit a developmental lag.

The present study has found that within the delinquent population tested 82.9 percent of the boys were preconventional thinkers; this finding is consistent with previously quoted studies. The percent usage of different levels of moral reasoning for the delinquent population in the present study is presented in Table 10. Kohlberg's (1963a) findings of percent usage of moral reasoning at different ages in middle class urban boys is presented in Table 10.

TABLE 10

Percent Usage of Moral Reasoning for Delinquent and Kohlberg's (1963a) Non-Delinquent Male Population.

| | Preconventional | | Conventional | | Postconventional | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Normal: Age 10 (Kohlberg, 1963a) | 32 | 27 | 22 | 17 | 2 | 0 |
| | T=59 | | T=39 | | T=2 | |
| Normal: Age 13 (Kohlberg, 1963a) | 11 | 13 | 25 | 31 | 15 | 5 |
| | T=24 | | T=55 | | T=20 | |
| Normal: Age 16 (Kohlberg, 1963a) | 10 | 9 | 23 | 32 | 20 | 6 |
| | T=19 | | T=55 | | T=26 | |
| Delinquent: Age 15.4 (present study) | 17 | 47 | 19 | 17 | 0 | 0 |
| | T=64 | | T=36 | | T=0 | |

The above table compares Kohlberg's (1963a) findings of moral reasoning found in a non-delinquent male population with the findings of the present study. Despite the fact that the populations differ in socioeconomic status, intelligence, age, parental factors and other factors, a few contrasts can be made. Comparing the delinquent boys, mean age of 15.4 years with normal boys, mean age 16.0 years from Table 10, the percentage of preconventional (stages 1 and 2) is strikingly different. Preconventional thinking represents approximately 64 percent of reasoning in moral dilemmas in delinquents as compared to 19 percent preconventional thinking for non-delinquent males. This high use of preconventional thinking is matched to some extent in the normal population when one compares moral reasoning exhibited by a normal 10 year old. Here approximately 60 percent of moral reasoning is at the preconventional level. Therefore when the percentage of preconventional thinking observed in delinquents, mean age of 15.4 years, is compared to Kohlberg's normal population, the group exhibiting a comparable percentage of preconventional thought is the 10 year old male. The developmental change occurring between the ages of 10 and 13 years would appear to not have occurred with the delinquent population under study.

The comparison of preconventional thought in delinquent and non-delinquent males is interesting, however, when percentage of stage 2 thinking of delinquents and normals is compared, one finds that at no time in normal development does stage 2 thinking exceed 27 percent, a striking contrast to the 47 percent stage 2 thinking that delinquents exhibited in the present study. Such a high percent usage of stage 2 thinking could be considered abnormal and is worthy of further discussion.

The clinical description of adolescent delinquents is well documented (Redl and Wineman, 1951; Erikson, 1959; Coleman, 1964). Characteristically, delinquent behavior is described by clinicians as behavior that opposes social order or opposes the principles on which society is constituted. Coleman's (1964) classification of delinquency into patterns of pathology views the delinquent population as being composed of organic delinquents (1 percent), mentally retarded delinquents (5 percent), psychotic delinquents (3 percent), neurotic delinquents (10 to 15 percent), the remaining 76 to 81 percent falling into the American Psychiatric Association classification category of Sociopathic Personality Disorder. Within the Sociopathic Personality Disorder category, Coleman suggests that a delinquent may be classified in one of two ways; antisocial or dyssocial. Coleman concludes that the great majority of persistent delinquents are of antisocial personality. Characteristics of antisocial personality as viewed by Coleman (1964), Cleckley (1970), and Ullman and Krasner (1969) are: inability to understand and accept ethical values; egocentrism, impulsiveness and irresponsibility, with low frustration tolerance and poor judgment; hedonism combined with unrealistic goals; lack of anxiety or guilt; inability to profit from mistakes; and inability to develop meaningful social relationships. Dyssocial personalities are characterized by individuals who are in conflict with the codes of society as a result of having lived all their lives in an abnormal moral environment (Ullman and Krasner, 1969). Dyssocial personalities can be viewed as products of subcultures capable of developing strong loyalties and showing no significant personality deviations other than those implied by adherence to their own subcultural norms.

From Table I, Kohlberg's stage 2 thinking is characterized by egocentricity, hedonism, and human relations being viewed in a very immediate, instrumental way. It would seem that Kohlberg's stage 2 closely parallels the psychiatric category of antisocial personality disorder. Kohlberg's parallel to the dyssocial personality disorder could be any of the stages above stage 2. One can best see the dyssocial personality falling into stage 4; the essential difference being the rules governing behavior. Coleman (1964) cites the dyssocial personalities of individuals involved in crime syndicates where the subcultural norms are substituted for social norms within a stage 4 cognitive process.

To classify a 15 year old adolescent as an antisocial personality disorder (psychopath), an adult classification, would be premature to say the least. However, studies have shown that measures of development that have a heavy cognitive ability base, such as I.Q. and moral judgment maturity, yield correlations in the 0.70's and 0.80's when such measures are compared 10 years later (Kohlberg, La Crosse and Ricks, 1972). More specifically the correlation between moral maturity scores at age 16 (or 13) years and at age 25 years (approximately a 10 year period) is .78. Such high correlations could, in part, be due to the fact that development of cognitive traits are largely cumulative, sequential and irreversible as compared to other traits that have been used as adult predictors; aggression, selfishness, anxiety, dependency and other temperament traits (Kohlberg, La Crosse and Ricks, 1972).

Aside from the possibility of high correlations between moral maturity scores at age 16 and 25 years, longitudinal research evidence suggests that antisocial behavior - particularly when some estimate of severity is taken into account - is the single most powerful predictor of later adjustment problems of any childhood behavior studied. Both these facts are consistent within each other. In other words, deviant behavior appears to be associated with preconventional thought, although preconventional thought is in itself no guarantee of antisocial behavior: clearly situational factors plan a part also. Secondly, cognitive abilities such as Kohlberg's moral judgment theory correlate at .78 when scores at age 16 and 25 years are compared, thus predicting a stage 2 antisocial orientation in adulthood. Research on antisocial childhood behavior concludes that juvenile antisocial behavior appears to be associated with psychiatric diagnoses in adulthood of sociopathic personality, alcoholism, hysteria and schizophrenia and with the extent of adult criminal anti-social problems (above and beyond diagnostic categories) (Kohlberg, La Crosse, and Ricks, 1972).

In a study by the Gluecks (1960), 500 lower-class boys ranging in age from 9 to 17 years were identified as delinquent by virtue of arrest and court convictions. In the next eight year period (age 17 to 25 years), 80 percent of these delinquents were arrested at least once and in the next six year period (ages 25 to 31 years) 60 percent of the original group had further arrests. From the present study it was found that 82 percent of the delinquent population were preconventional thinkers. The consistency between the two statistics is indeed surprising.

From the above discussion one is tempted to conclude that the over representation of stage 2 thinking in the delinquent males studied will likely continue to exist into young adulthood. With this as a possibility, the future classification of such persons as sociopathic personality disorder; antisocial reaction, becomes a very real possibility.

## Evaluation of Treatments

The percent usage of different stages for the preconventional group taking part in the study is presented in Table II.

TABLE II

Stage Usage in Percent on Pre and Post-Tests of Delinquents in Study.

| | | Stage Usage in Percent | | | | | |
|---|---|---|---|---|---|---|---|
| Treatment | | 1 | 2 | 3 | 4 | 5 | 6 |
| Decentering | Pre | 21.48 | 51.34 | 13.47 | 13.8 | - | - |
| | Post | 8.3 | 48.1 | 32.4 | 11.1 | - | - |
| Information Conflict | Pre | 12.73 | 52.9 | 22.8 | 11.4 | - | - |
| | Post | 10.4 | 39.8 | 43.7 | 5.8 | - | - |
| Decentering-Information Conflict | Pre | 20.3 | 49.3 | 18.8 | 13.7 | - | - |
| | Post | 16.3 | 39.8 | 36.1 | 7.4 | - | - |
| Control | Pre | 16.0 | 41.0 | 22.2 | 18.5 | 1.3 | - |
| | Post | 18.5 | 32.4 | 45.3 | 3.7 | - | - |

From the above table one can see that usage of stage 2 thinking of delinquent boys treated is slightly higher than the percentage of stage 2 usage of the control group. From Table II, of the groups treated we can see that the greatest drop of stage 2 usage occurred in the treatment group, Information Conflict. Furthermore, the greatest increase in stage 3 thinking also occurred within the same treatment group, Information Conflict. These trends are consistent with the results obtained from the one way analysis of covariance, that is, the treatment group Information Conflict appeared to have the most effect in increasing stage 3 usage.

When comparing the three treatment groups one notices a higher reduction of type 2 thinking in treatment Information Conflict and Decentering-Information Conflict. No such reduction appears to have occurred with the Decentering treatment group; their reduction was in stage 1. The changes of type 2 thinking observed in the two treatment groups is consistent in that both treatments were exposed to one stage higher thinking thus reducing stage 2 thinking and seeing the expected increase in stage 3 thinking. The shift occurring in the Decentering treatment would appear to be a shift from stage 1 to stage 2 accompanied by a shift from stage 2 to stage 3. The result is that stage 1 percentage has decreased, stage 2 percentage remains almost the same and stage 3 has increased. Theoretically one would expect decentering to have an effect on stage 1 thinking as stage 1 is also characteristic of egocentricity.

Though no significant results were obtained between treatment groups, the trend would appear to indicate that Information Conflict, a group discussion on a moral dilemma, had the most effect in shifting stage 2 thinking to stage 3 thinking. A comparison of this method against the other two treatment methods is perhaps worthwhile.

Theoretically group discussions on moral dilemmas are superior in two respects to the other treatments used. The first factor is that of quality of decentering (role-taking) that can occur in peer group discussions. Role-taking occurs in social interaction situations when confrontation from social agents, peers, teachers and parents, causes the individual to react to the self's behavior in the role of the other. Thus the first prerequisite for role-taking is participation in social interaction with interchange of thought and cooperation with others. Such a prerequisite requirement is met when one participates in a group (Sigel, 1969; Kohlberg, 1969). The centrality of the individual in the communication and decision-making structure of the group is confronted, thus forcing the individual to either a subordinate, passive, uninvolved member of the group or forcing the individual to decenter and by doing so becoming an integral participant of social interaction. Participation is partially a matter of sheer amount of interaction and communication in the group. The quality of decentering is related to the amount of involvement. The more the individual is responsible for the decision of the group and for his own action in the consequences for the group, the more must he take the role of the others in the group. When an individual carried the discussion in a group he must role-take all the subordinate's roles and be aware of their relations to one another and to himself. If he fails to do this, his contribution is egocentric and meaningless to the social agents, (peers) in the group. Confrontation occurs, and it is at this point that the egocentric individual faces the consequences of not having taken into account self's behavior in relation to others.

This type of decentering would appear of greater benefit particularly in a situation where social information such as moral reasoning is being developed. Decentering in group discussions as compared to the decentering tasks of the other treatments; where the individual's egocentricity is not confronted, is felt to be superior. As an example, a subject from the Decentering treatment group is required to tell a story from the point of view of one of the figures in a scene. Upon completing this story he is asked to role-take another figure in the scene and role-take that person's reaction to the initial role. Decentering appears to occur; however the individual can carry his social egocentric thinking with him from role to role. Perhaps a concrete example of this may help. 'A parent scolds a young child for teasing a peer explaining that such ridicule hurts the person receiving it. The child is then asked to understand what the parent is doing, and the child, in role-taking, see parents as persons gaining pleasure from scolding young children'. Here the initial role of the child is egocentric and when asked to role-take may decenter and successfully imagine himself as a parent, however he carried with him social egocentricity. The decentering part of treatment, Decentering-Information Conflict, does not have the problem of social egocentricity being carried from role to role. In this treatment, when the role is changed, the role is accompanied with a change in moral reasoning, that is reasoning at stage 3.

The second factor that theoretically supports the superiority of group discussions on moral issues is one of quantity of cognitive conflict. Langer (1969) refers to this factor as an energetic parameter. Inhelder and Sinclair (1969) presents evidence that suggests the child must be cognitively "ready" to assimilate contradictory information and to feel that something is wrong, if there is to be any cognitive reorganization and development (Langer, 1969). This "readiness" is achieved through conflict, conflict within the child's own stage thinking. The child is asked to solve a task using his own thinking. Contradictions, discrepancies and the inadequacies of his solutions to resolve the task prepare, make "ready" or energize the child for assimilation of oncoming information at a higher cognitive level. In the present study the energetic, make "ready", factor occurs in group discussions. Here the individuals attempted to resolve the social dilemma using their own cognitive structures, stage 2. As the discussion progresses, contradictions and discrepancies occurred which reveal the inadequacy of their thinking. It is at this point that higher cognitive reasoning, stage 3, will be most readily assimilated. Subjects successful in assimilating this new information then use it to defeat arguments of persons not yet able to assimilate stage 3 thinking. In summary, the energetic factor reaches a maximum by conflict first occurring within a stage, then as subjects assimilate stage 3 information, conflict occurs between stages.

The conflict within stage, viewed as being essential for inducing cognitive restructuring (Kohlberg, 1969) does not occur in treatment Decentering-Information Conflict. The Information Conflict occurring here is between stage conflict and would theoretically have less of the energetic function described above. One should also remember that external cognitive conflict, be it within stage conflict, between stage conflict or both, may not necessarily create an internal cognitive conflict (disequilibrium).

The above factors of decentering and maximum cognitive conflict may not necessarily occur when social dilemmas are presented for group discussion (as was the case in the present study). The subjects in the treatment group, Information Conflict, participated in group discussions on moral issues. Because of recommendations of numbers of subjects participating in a single group discussion (Foulkes and Anthony, 1965) the treatment information conflict consisted of two groups, each consisting of five preconventional subjects, one conventional peer and two experimenters representing conventional thinking. Both groups discussed the same moral dilemmas in the same order of presentation. The functioning of the two groups, however, were very different.

The boys in group A felt a great deal of obligation to resolve the social dilemma, in fact discussion often went overtime as the boys attempted to convince each other of their solutions. All members of group A initiated and carried the discussion and one could often observe members of the group battling with conflicting points of view. An example of group A's attempts at resolving a social dilemma is presented:

> Moderator: Howard, a famour nuclear scientist, is in jail for treason. He has been tried according to the law and found guilty. He has been sentenced to 15 years in prison with no chance of getting out sooner on parole. The truth, however, is that he is not guilty, that he is innocent. Yet there are no witnesses who can prove his innocence. Several of his close friends have arranged for his escape. The escape plan gives him 4 chances out of 5 of escaping to a place where he would not be caught. In escaping, however, Howard realizes that many people will believe more strongly than ever that he is a traitor. Should Howard escape or should he remain in jail?
>
> Bill: Escape
>
> John: Escape
>
> Carl: Stay in jail
>
> Peter: Escape
>
> Mark (conventional peer): Escape
>
> Experimenter: Stay in jail
>
> Moderator: Now give your reasons for your decisions.
>
> Bill: Because he's going to be in jail for 15 years, man, and there's no way I'd stay.
>
> John: I agree, no way I'd stay in jail.
>
> Carl: No way man, if you get caught, they slap another 5 years on and now you're in jail for 20 years.

Mark (cp): No, you should escape, you shouldn't be in jail in the first place. No one would blame you, you're innocent and you took a bum rap.

Experimenter: But, if you escape and you're innocent, no one would believe you're innocent anymore. I think that if you stayed in jail and acted like an innocent man, the courts might look into your case further.

Carl: Yeh Mark, and if they caught you escaping, then the courts would never believe you, they'd just throw the key away.

Mark (cp): Yeh, but the story said you had 4 out of 5 chances of making it.

Carl: But there's still that l out of 5.

Bill: Carl's got a point Mark, with my luck I'd probably get caught. No, I don't know, 15 years is a long time.

Carl: Yeh, but at least they might open up your case again if you kept saying you're innocent and didn't escape.

John: No man, if you got guys on the outside to set it up like the story says, I'd bust out.

Peter: I just thought of something, John, what is those guys helping you got caught during your escape. Then, all those innocent guys would end up in jail because of you.

John: That's too bad, I didn't ask them to help.

Peter: It's just like you to get buys into trouble.

Bill: Yeh, some friend you are, I can't see how anyone would want to help a guy like you escape.

At this point the Moderator would ask the boys to vote again on the question of escaping or staying in jail. Two vote in favour of escape, 4 vote in favour of staying in jail. The discussion would then resume, with votes taken periodically. The group would terminate when everyone came to mutual agreement and had stated their reasons for their final vote.

Group B, on the other hand, showed minimal involvement with the social dilemmas presented to them. Very often only one person would express his reasons for voting the way he did; others in the group would quickly agree on his statement thus resolving the dilemma and freeing the boys from the group. Minimal responsibility for the decision was observed with minimal external conflict at either within stage or between stage thinking. Group B's inability to become involved partially stemmed from individuals making up the group. Three of the five boys were experiencing personal difficulties elsewhere within the institution, thus being unable to benefit from these group experiences. If random selection of participants was not employed, proper selection of subjects judged as being able to benefit from group experiences could well have a greater effect than the present study indicates.

In the present study, groups A and B were separated and an analysis of covariance was performed (see Table 4). The adjusted mean of group A was 257, while group B's adjusted mean was 242. Though the total N of this comparison is only nine, the observed group involvement is supported by the slight trend shown in the adjusted group means.

## Factors Reducing Effectiveness of the Study

The failure of the present study to demonstrate significant differences between treatment groups is attributed, first to the short length of time that the delinquent boys experienced treatment. The restriction of only alloting two weeks for treatment was mainly due to an attempt to keep subjects in the study and thus reduce mortality. It was felt that if the study was contained to a two-week period, mortality due to discharge of subjects, transfer of subjects to other settings and runaways, would be greatly reduced. Even with this short time, mortality did occur.

Second, one would not expect total restructuring of stage 2 thinking into stage 3 thinking to occur in a two week period. Studies in conservation show conservation is acquired over a period of years rather than weeks (Sigel and Hooper, 1968). Acquisition of moral reasoning from preconventional to conventional levels would appear to follow a similar pattern. Kohlberg stated that preconventional thinking dominates a child's reasoning until age 10 but it is not until age 13 that conventional thinking stabilizes and becomes the dominant mode of reasoning (Kohlberg, 1963a).

The study by Beck, Sullivan and Taylor (1972), discussed earlier, found no significant changes had occurred between the control and experiment groups when post-test results administered immediately after treatment were compared. However, significant results did occur between the two groups' moral reasoning at stage 5 when results of a follow-up post-test, administered one year later, were compared. The authors conclude that two factors may have contributed to the delay in formulation of stage 5 thinking. One plausible answer is that the transition from conventional to postconventional thinking requires a major restructuring of one's perspective and is different in nature from the lower-stage transitions involved in the Turiel (1966) and Tracy (1971) studies (Beck, Sullivan and Taylor, 1972).

The present study attempted to induce restructuring at the lower stages but was unable to obtain any significant results. Taking into account the population of the present study, one could argue that for a delinquent to move from a preconventional to a conventional level of reasoning would require major restructuring; more so than for a non-delinquent subject. The present study found an abnormal over-use of stage 2 thinking. For delinquents to undertake the transition from a hedonistic, egocentric, disloyal orientation to one of delay of gratification, sociocentrism and loyal good-boy orientation would require considerable time.

Beck, Sullivan and Taylor (1972) concluded that the second factor inhibiting immediate restructuring was one of defensiveness on the part of the subjects. The authors suggested that by introducing cognitive conflict that disrupted established conventional reasoning, a temporary retrenchment of conventional thinking was produced. Experience of conflict and struggling with seemingly unresolvable social problems lead to a sense of frustration and retreat from new forms of moral reasoning. The follow-up results would appear to have indicated some tempering of these feelings of conflict. Furthermore, opportunities for exercising some of the postconventional notions in natural life experiences could have reinforced their classroom experiences.

The present study also created a mood of defensiveness, particularly in the treatments requiring the subject to state their reasoning for their moral decisions. Subjects often asked if what they said would affect their status within the institution. During some group discussions on moral issues, subjects felt that the issues being discussed were unresolvable, and both frustration and a reluctance to accept new forms of reasoning were observed. It was not possible to follow up the subjects for the purpose of post-testing, so the long range effects of the present treatments are unknown. The conditions here are however sufficiently similar to those observed by Beck et al.

(1972) to suggest that long range changes in the treatment groups could occur.

The present study involved a total of 36 subjects, 9 per treatment group. Despite the fact that the total male population of the institution was sampled, the small number of subjects reduced the likelihood that significant changes could be detected. On the other hand, by maximizing sample size, as was done in the present study, one runs into the difficulty of working with moral maturity scores that range over 100 or more points when looking at the highest and lowest scores of the subjects used in the study. Such a large range of scores creates a large bimodal distribution with large standard deviations. For significant changes at the $p=0.05$ level to occur, large increases in post-test scores would have to occur.

The difficulty of the large range of scores is also reflected in the calculation of a regression equation. The standard error of predicting Y, using a regression equation with factors pre-test and positive variation score, is 40. To overcome this difficulty, one of two methods could be employed; restrict the range of pre-test scores by only working with subjects of a pure stage type, or extend treatment programs over a much longer period of time thus allowing restructuring to occur if indeed, treatment induces such restructuring.

## Stage Mixture, Age and Moral Reasoning

The significance of stage mixture (décalage) as being an indicator of susceptability to reintegration occurring was discussed in Chapter I. Turiel (1969) indicates that a high amount of stage mixture is characteristic of the state at which an individual is most ready to integrate new information. The present study investigated stage mixture and its relationship to persons observed as experiencing change. Two methods of defining stage mixture were outlined and investigated. The first method, stage mixture being defined as a pure or mixed type, where pure type is defined as 60 percent response at one stage with not more than 20 percent usage in any other stage; mixed type consistency of all not meeting the requirement of the pure definition. This definition of stage mixture was found to be non-significant to change.

The second method, defined as a positive variation score; high amount of percent usage in stages above the modal stage; reached a significance level of 0.07 in both covariance and multiple regression. technique. In other words, a high positive variation score appears to be a better predictor of change than the more global definition of stage mixture used by Kohlberg. One might view a positive variation score as being an indicator of the amount of internal contradition and cognitive disorganization present in the subject. Because of the positive direction (stage usage above the modal stage) indicated, reintegration at a higher level is much more likely if higher level information is presented.

A surprising trend is observed when age and change in moral reasoning are compared. From Table 7 it can be seen that older boys tended to change more than younger boys, though not to a significant extent. This finding is the opposite to what one would expect. Due to the continuous use of low stage thinking over a long period of time, one would have expected greater stability of moral reasoning to have occurred in older boys. Such stability or crystallization would not readily lend itself to change. The moderate trend found in the present study is insufficient to draw conclusions from. Further investigation into the relationship of age to change in moral reasoning is needed.

# CHAPTER V

## CONCLUSIONS AND IMPLICATIONS

The findings of the present study indicate that over 80 percent of male adolescent delinquents confined to the institution studied used moral reasoning predominantly at a preconventional level. This finding is consistent with other studies investigating moral reasoning in delinquents. A further finding indicated that type 2 reasoning dominated. Such thinking is characterized by egocentrism, hedonism and an absence of ability to conform to rules and authorities of society. This cognitive orientation is consistent with clinical observations made by psychoanalytic writers on delinquents. Furthermore such a cognitive orientation is associated, to some extent, with the adult psychiatric classification of sociopathic personality disorder - antisocial reaction and dyssocial reaction.

The present study also attempted to evaluate the most effective method of inducing cognitive moral development in delinquent boys. Three treatment programs were outlined and investigated. Though no significant changes were attributed to treatment, moderate trends suggest that group discussions on moral dilemmas appeared to have the most effect. Furthermore it was suggested that effective group discussions required the subjects to be involved and committed to the resolution of the dilemma thus fulfilling the requirement of role-taking. At the same time cognitive conflict of information at the subject's present level of operation maximized confrontation.

The inability of the study to induce statistically significant changes is in part attributed to three additional factors. First the short time period the subjects underwent treatment in relation to length of time change naturally occurs had definite restrictive effects. The present study was unable to obtain post-test results on the long term effects of the treatments; a definite consideration for future studies. Second, the small delinquent male sample used in the study hindered the chances of significant differences being found between treatments. Third, the large range of moral maturity scores created a bimodal distribution with large standard deviations requiring very large gains in moral maturity scores to occur if significance levels are to be achieved.

Previous studies have indicated that stage mixture is associated with change. Depending on the definition of stage mixture the present study supported such claims. It was found that a positive variation score (stage mixture above the modal stage) was related to change in the post-test moral maturity score at a significance level of .08. Further study as to the "readiness" to change, of subjects having high positive variation scores, is needed. The present study suggests that some relationship may be found. The hypothesis that younger boys change more readily than older boys was not supported. The moderate trends on post-test results suggest the opposite occurs. From the present study no conclusions can be drawn and further study can only resolve this discrepancy.

Unanswered questions from the present study suggest the following avenues for future research. The question of moral judgment, reflected by the Kohlberg moral maturity score, and its relationship to moral action is still in question.

A relationship between the cognitive orientation of stage 2 thinking and the American Psychiatric Association classification of Sociopathic Personality Disorder – Antisocial reaction was shown to exist but at a purely descriptive level. For confidence to be placed in the Kohlberg instrument as a device for identifying antisocial personality disorders, validation research using instruments known to correlate with psychopathy must be undertaken.

The majority of delinquents predominantly used preconventional reasoning, but a small percentage of delinquents were found at higher levels of moral reasoning, stages 3 and 4. Delinquents exhibiting conventional moral reasoning and the parallel that can be drawn to dyssocial personality disorder is worthy of future research.

Future study of the relationship of recidivism to stage of moral reasoning, in light of the high correlation of moral maturity scores at ages 16 and 25 years, could lead to a better understanding of delinquency and its relationship to adult crime.

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## APPENDIX A

## SCENES AND CHARACTERS USED FOR ROLE-TAKING TREATMENT ADAPTED FROM SCHNEIDMAN'S MAKE A PICTURE STORY TEST

1. Scene: Living Room

   Characters: N-6 C-9 M-11

2. Scene: School Room

   Characters: C-9 M-15 C-1

3. Scene: Dream

   Characters: M-6 C-10 M-7 F-5

4. Scene: Camp

   Characters: F-4 M-3 M-18

5. Scene: Street

   Characters: C-8 C-7 C-12

6. Scene: Shanty

   Characters: C-11 N-8 C-2

# APPENDIX B

## DILEMMA SITUATIONS GROUP COGNITIVE-CONFLICT EXPERIMENTAL CONDITION

### Story I

During the Second World War, a sub-chaser captain was faced with this situation. In the convoy he was guarding against German submarines, many cargo ships had been sunk and there were many sailors in the open sea waiting to be picked up. On the other hand, he was quite sure that he had trapped one German sub. The captain believed the sub had turned off its engines and was sitting on the ocean floor. One depth charge would destroy the German sub but it would also kill the sailors on his own side waiting to be picked up. What should the captain do?

### Story II

Howard, a famous nuclear scientist, is in jail for treason. He has been tried according to the law and found guilty. He has been sentenced to 15 years in prison with no chance of getting out sooner on parole. The truth, however, is that he is not guilty, that he is innocent. Yet there are no witnesses who can prove his innocence. Several of his close friends have arranged for his escape. The escape plan gives him 4 chances out of 5 of escaping to a place where he would not be caught. In escaping, however, Howard realizes that many people will believe more strongly than ever that he is a traitor. Should Howard escape or should he remain in jail?

Story III

T. E. Lawrence, author, historian, and a special English agent, fought with the Arabs against the Turks during World War I. The ragged Arab army which he advised camped for an evening at an oasis. During the night one of his most trusted sergeants, Hamed the Moor, was accused of murdering a member of an Arab tribe taking part in the army. The relatives of the dead man, according to the ancient desert code, demanded Hamed's death.

The circumstances around the killing were not clear, yet due to the difficult times there was no chance of a trial. Hamed fervently declared his innocence, and Lawrence believed him. However, Lawrence's first duty was to maintain unity in the army; and it was clear that to preserve unity Hamed had to die.

Should Lawrence shoot Hamed?

Story IV

During a bad winter storm, an aircraft carrying four persons crashed. The pilot, an experienced bushman, was not seriously hurt, however, his co-pilot had sustained a very serious internal injury while his two passengers had received fractures to their legs and arms. The pilot made his companions comfortable in a hut he built, but he realized that there was only enough food provisions for four men to last a week. The weather was extremely cold and the question of survival without food seemed hopeless. The pilot, who had received medical training during the war, examined the co-pilot's injury and realized he could not be moved and with the loss of blood it was uncertain if the co-pilot would live. Quick rescue by the Airforce search teams seemed unlikely as the storm continued to rage and was expected to do so for at least four days. The pilot felt that he was not badly off course, and thought he knew where he could reach help, but it would take him perhaps as long as five days. He also realized that if he left, the two passengers would not be able to give the medical attention that he could give to the co-pilot.

What should the pilot do?

## Story V

A highly respected scientist working in a top secret lab found trouble in being able to support his family. Because of the war he had taken a cut in salary. He had three children to support and a wife who recently underwent a costly operation. As a result his money situation was very tight because he had high payments to make because of the operation, thus leaving nothing for food for his family. Realizing that a foreign country would pay a great deal of money for the formula he was working on, he contacts an agent of the country and makes arrangements for the sale. The sale is made and the money paid. However, his country discovers the information leak. He contacts the foreign agent and explains that the information leak has been discovered, but the agent explains there is nothing to worry about because one of his co-workers has been framed by the foreign agent, and when the police investigate he will surely be found guilty. The frame works and the co-worker is found guilty and sentenced for 15 years. Should the scientist tell the police that an innocent man has been convicted of the crime he committed?

Story VI

A young Edmonton man, Bill, receives a telegram from Toronto explaining that his father has suffered a heart attack and is not expected to live long. Bill, who has found it difficult to get a job through the winter, has no car or money nor is he able to borrow money for plane or bus fare. Bill is explaining the situation to a friend when the conversation is overheard by a stranger. After the friend leaves, the stranger approaches Bill and states that he can help. The stranger explains that he planned on stealing a car, driving to Toronto and selling it, but that he needed another driver and a lookout while the car was being stolen. Reluctantly Bill agrees. The two succeed in stealing the car, but are picked up on the highway by the police. Should Bill have stolen the car in order to be able to see his ailing father?

# APPENDIX C

## STORIES FOR ROLETAKING-CONFLICT

## EXPERIMENTAL GROUP

### Story I

During the Second World War, a sub-chaser captain was faced with this situation. In the convoy he was guarding against German submarines, many cargo ships had been sunk and there were many sailors in the open sea waiting to be picked up. On the other hand, he was quite sure that he had trapped one German sub. The captain believed the sub had turned off its engines and was sitting on the ocean floor. One depth charge would destroy the German sub but it would also kill the sailors on his own side waiting to be picked up. What should the captain do?

### Level II Stage 3:

a. Yes, you should drop the charge because a good captain would. If you want to be respected and looked up to, you must drop it. Besides, you couldn't ever be punished for doing what you thought was right. No one really can blame you, it's the war that got you into this fix. I think most captains in this case would drop the charge so I think you should too. You really can't refuse to do what is best--I mean you must drop it. Officers higher than you would probably do it so you should too.

b. No, you shouldn't drop the charge because that wouldn't be human. No decent person could do that. Besides I doubt if any admiral or high officer would do it himself. A good captain would think about the wives and families of the sailors floating around. Besides you should save the sailors in the water because they are helpless and need your help more. I don't see any good in dropping the charge.

Story II

Howard, a famous nuclear scientist, is in jail for treason. He has been tried according to the law and found guilty. He has been sentenced to 15 years in prison with no chance of getting out sooner on parole. The truth, however, is that he is not guilty, that he is innocent. Yet there are no witnesses who can prove his innocence. Several of his close friends have arranged for his escape. The escape plan gives him 4 chances out of 5 of escaping to a place where he would not be caught. In escaping, however, Howard realizes that many people will believe more strongly than ever that he is a traitor. Should Howard escape or should he remain in jail?

Level II Stage 3:

a. Yes, you should escape. You should not be in jail to begin with. You really can't be blamed for escaping. Even if you were caught, a good judge would understand why you tried to escape. Maybe you could escape and then write the judge and explain why you escaped. Really the courts can't expect someone to obey when they have made a mistake.

b. No, you should not escape. You would not be a good citizen. You really can't blame the courts. You were given a fair trial. Perhaps if you acted as an innocent man, the courts might look into the case further. Really you must remember that the courts are doing their best. You really can't blame the courts for the trouble you are in.

Story III

T. E. Lawrence, author, historian, and a special English agent, fought with the Arabs against the Turks during World War I. The ragged Arab army which he advised camped for an evening at an oasis. During the night one of his most trusted sergeants, Hamed the Moor, was accused of murdering a member of an Arab tribe taking part in the army. The relatives of the dead man, according to the ancient desert code, demanded Hamed's death.

The circumstances around the killing were not clear, yet due to the difficult times there was no chance of a trial. Hamed fervently declared his innocence, and Lawrence believed him. However, Lawrence's first duty was to maintain unity in the army; and it was clear that to preserve unity Hamed had to die.

Should Lawrence shoot Hamed?

Level II Stage 3:

a. Yes, you should shoot Hamed. Killing isn't good but you really can't be blamed for it because you are doing it for the army. You are doing your best to keep the army together so you should not be criticized. Really if Hamed saw the situation the way you do, he would have no right to be freed. Hamed might realize he is doing a heroic act and later might be honored for dying.

b. No, you should not shoot Hamed. There must be a better way of keeping the army together. If you were a good leader you could talk the Arabs out of wanting Hamed dead. You would be a better person if you just faced up to the situation. Really, I can't see a decent person shooting a trusted friend. That just isn't right.

## Story IV

During a bad winter storm, an aircraft carrying four persons crashed. The pilot, an experienced bushman, was not seriously hurt, however, his co-pilot had sustained a very serious internal injury while his two passengers had received fractures to their legs and arms. The pilot made his companions comfortable in a hut he built, but he realized that there was only enough food provisions for four men, to last a week. The weather was extremely cold and the question of survival without food seemed hopeless. The pilot, who had received medical training during the war, examined the co-pilot's injury and realized he could not be moved and with the loss of blood it was uncertain if the co-pilot would live. Quick rescue by the Airforce search teams seemed unlikely as the storm continued to rage and was expected to do so for at least four days. The pilot felt that he was not badly off course, and thought he knew where he could reach help, but it would take him perhaps as long as five days. He also realized that if he left, the two passengers would not be able to give the medical attention that he could give to the co-pilot. What should the pilot do?

### Level II Stage 3:

a. You should stay and give the medical attention that the co-pilot needs. Besides the co-pilot is your friend and it would just be natural to want to stay and save your friend. Certainly the airforce realizes you have crashed and that you would be needing help quickly. They have probably been notified by now and are looking for us.

b. You should go because the co-pilot would want it that way. The co-pilot would want to see the other passengers saved. It's the only fair thing to do. Besides if you get help in time and rescue us you would be a hero for saving all of our lives.

Story V

A highly respected scientist working in a top secret lab found trouble in being able to support his family. Because of the war he had taken a cut in salary. He had three children to support and a wife who recently underwent a costly operation. As a result his money situation was very tight because he had high payments to make because of the operation, thus leaving nothing for food for his family. Realizing that a foreign country would pay a great deal of money for the formula he was working on, he contacts an agent of the country and makes arrangements for the sale. The sale is made and the money paid. However, his country discovers the information leak. He contacts the foreign agent and explains that the information leak has been discovered, but the agent explains there is nothing to worry about because one of his co-workers has been framed by the foreign agent, and when the police investigate he will surely be found guilty. The frame works and the co-worker is found guilty and sentenced for 15 years. Should the scientist tell the police that an innocent man has been convicted of the crime he committed?

Level II Stage 3:

a. Yes, you should tell the police that you did it because you would feel terrible inside if you did something like that knowing an innocent man is in prison for something you did. Your conscience would constantly be telling you to confess. Besides, if you talked to the police and explained why you did it, they might let you off easier.

b. No, you should not tell the police because a good husband and father would care enough for his family to do anything to support them. It is only natural to do anything for your own wife and children. Besides no one could blame you considering all the circumstances. Under the circumstances it couldn't be wrong.

Story VI

A young Edmonton man, Bill, receives a telegram from Toronto explaining that his father has suffered a heart attack and is not expected to live long. Bill, who has found it difficult to get a job through the winter, has no car or money nor is he able to borrow money for plane or bus fare. Bill is explaining the situation to a friend when the conversation is overheard by a stranger. After the friend leaves, the stranger approaches Bill and states that he can help. The stranger explains that he planned on stealing a car, driving to Toronto and selling it, but that he needed another driver and a lookout while the car was being stolen. Reluctantly Bill agrees. The two succeed in stealing the car, but are picked up on the highway by the police. Should Bill have stolen the car in order to be able to see his ailing father?

Level II Stage 3:

a. Yes, you should have stolen the car. It would be natural to want to see your father when he is very ill and may be dying. You would love your father enough to do it. A good son would do anything to see his father when he is so ill and perhaps dying.

b. No, you should not have stolen the car. In a case like this surely someone would lend you the money, you just didn't try hard enough. You could probably have gotten money from a good loan company. Besides, it isn't good to steal, honesty is the best policy. You would also feel very guilty if you took someone else's property and your conscience would be telling you that you can't get away with it.

## APPENDIX D

## KOHLBERG DILEMMA SITUATIONS USED AS A PRE-TEST MEASURE OF MORALITY JUDGMENT

Joe is a 14-year old boy who wanted to go to camp very much. His father promised him he could go if he saved up the money for it himself. So Joe worked hard at his paper route and saved up the $40 it cost to go to camp and a little more besides. But just before camp was going to start, his father changed his mind. Some of his friends decided to go on a special fishing trip, and Joe's father was short of the money it would cost. So he told Joe to give him the money he had saved from the paper route. Joe didn't want to give up going to camp, so he thought of refusing to give his father the money.

0. Should Joe refuse to give his father the money? Why?

2. Does his father have the right to tell Joe to give him the money?

1. Does giving the money have anything to do with being a good son?

6. Which is worse, a father breaking a promise to his son or a son breaking a promise to his father?

6a. Why should a promise be kept?

Joe wanted to go to camp but he was afraid to refuse to give his father the money. So he gave his father $10 and told him that was all he made. He took the other $40 and paid for camp with it. He told his father that the head of the camp said he could pay later. Joe went off to camp, and the father didn't go on the fishing trip. Before Joe went to camp, he told his older brother, Alexander, that he really had made $50 and that he lied to his father and said he'd made $10. Alexander wonders whether he should tell his father or not.

10. Should Alexander, the oldest brother, tell their father that Joe had lied about the money or should he keep quiet about what Joe had done? Why?

12. Why would a boy think he shouldn't tell on a friend or brother?

15. Which is more important, being a loyal son or a loyal brother? Why?

This question applies only if subject thinks Alexander should tell the father:

17. Suppose a few months before, Alexander had secretly taken something of their father's and accidently broke it. Joe knew about it but kept quiet to protect Alexander. Should Alexander do the same for Joe now? Why?

In Korea, a company of Marines was very outnumbered and was retreating before the enemy. The company had crossed a bridge over a river, but the enemy was mostly still on the other side. If someone went back to the bridge and blew it up as the enemy were coming over it, it would weaken the enemy. With the head start the rest of the men in the company would have, they could probably then escape. But the man who stayed back to blow up the bridge would probably not be able to escape alive; there would be about a 4 to 1 chance he would be killed. The captain of the company has to decide who should go back and do the job. The captain himself is the man who knows best how to lead the retreat, and if he goes himself, the men will probably not get back safely. He asks for volunteers, but no one will volunteer.

50. Should the captain order a man to go on this very dangerous mission or should he go himself? Why?

52. Does the captain have the right to order a man if he thinks it best to? Why?

The following questions apply only if the subject says the captain should not order a man:

51. Which would be best for the survival of all the men: ordering a man or the captain going himself?

If it were absolutely certain that many more lives would be lost if he went himself and were killed, should he order another man to go against his will?

The captain finally decided to order one of the men to stay behind. One of the men he thought of was one who had a lot of strength and courage but he was a bad troublemaker. He was always stealing things from the other men, beating them up, and wouldn't do his work. The second man he thought of had gotten a bad disease in Korea and was likely to die in a short time anyway, thought he was strong enough to do the job.

60. Should the captain send the troublemaker or the sick man? Why?

61. Who would it be fairer to send?

63. Would it be fair to send the troublemaker as a punishment?

Several years later, the grown up brothers had gotten into serious trouble. They were secretly leaving town in a hurry and needed money. Alexander, the older one, broke into a store and stole $500. Joe, the younger one, went to a retired old man who was known to help people in town. Joe told the man that he was very sick and needed $500 to pay for an operation. Really he wasn't sick at all, and he had no intention of paying the man back. Although the man didn't know Joe very well, he loaned him the money. So Joe and Alexander skipped town, each with $500.

70. If you had to say who did worse, would you say Alexander did worse in breaking into the store and stealing the $500 or Joe did worse in borrowing the $500 with no intention of paying it back? Why?

74. Would you feel like a worse person stealing like Alexander or cheating like Joe?

71. Why shouldn't someone steal from a store?

74. Who would feel worse, the storeowner who was robbed or the man who was cheated out of the loan? Why?

# APPENDIX E

## KOHLBERG DILEMMA SITUATIONS USED AS A POST-TEST MEASURE OF MORALITY JUDGMENT

In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $200 for the radium and charged $2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about $1,000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it". So Heinz got desperate and broke into the man's store to steal the drug for his wife.

20. Should Heinz have done that? Was it actually wrong or right? Why?

23. Is it a husband's duty to steal the drug for his wife if he can get it no other way? Would a good husband do it?

25. Did the druggist have the right to charge that much when there was no law actually setting a limit to the price? Why?

The next two questions apply only if subject thinks Heinz should steal the drug:

23a. If the husband does not feel very close or affectionate to his wife, should he still steal the drug?

24. Suppose it wasn't Heinz's wife who was dying of cancer, but it was Heinz's best friend. His friend didn't have any money and there was no one in his family willing to steal the drug. Should Heinz steal the drug for his friend in that case? Why?

The next two questions apply if subject thinks Heinz should not steal the drug:

Would you steal the drug to save your wife's life?

If you were dying of cancer but were strong enough, would you steal the drug to save your own life?

Everyone:

Heinz broke in the store and stole the drug and gave it to his wife. He was caught and brought before the judge. Should the judge send Heinz to jail for stealing, or should he let him go free? Why?

The drug didn't work, and there was no other treatment known to medicine which could save Heinz's wife, so the doctor knew that she had only about six months to live. She was in terrible pain, but she was so weak that a good dose of painkiller like ether or morphine would make her die sooner. She was delirious and almost crazy with pain, and in her calm periods, she would ask the doctor to give her enough ether to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway.

Everyone:

47. The doctor finally decided to kill the woman to put her out of her pain, so he did it without consulting the law. The police found out and the doctor was brought up on a charge of murder. The jury decided he had done it, so they found him guilty of murder even though they knew the woman had asked him. What punishment should the judge give the doctor? Why?

48. Would it be right or wrong to give the doctor the death sentence.

49. Do you believe that the death sentence should be given in some cases? Why?

While all this was happening, Heinz was in jail for breaking in and trying to steal the medicine. He had been sentenced for ten years. But after a couple of years, he escaped from the prison and went to live in another part of the country under a new name. He saved money and slowly built up a big factory. He gave his workers the highest wages and used most of his profits to build a hospital for work in curing cancer. Twenty years had passed when a tailor recognied the factory owner as being Heinz, the escaped convict whom the policy had been looking for back in his home town.

80. Should the tailor report Heinz to the police? Would it be right or wrong to keep it quiet? Why?

81. Is it a citizen's duty to report Heinz? Would a good citizen?

84. If Heinz was a good friend of the tailor, would that make a difference? Why?

82. Should Heinz be sent back to jail by the Judge? Why?

During the war in Europe, a city was often bombed by the enemy. So each man in the city was given a post he was to go to right after the bombing, to help put out the fires the bombs started and to rescue people in the burning buildings. A man named Diesing was made the chief in charge of one fire engine post. The post was near where he worked so he could get there quickly during the day, but it was a long way from his home. One day there was a very heavy bombing and Diesing left the shelter in the place he worked and went towards his fire station. But when he saw how much of the city was burning he got worried about his family. So he decided he had to go home first to see if his family was safe.

90. Was it right or wrong for Diesing to leave his station to protect his family? Why?

93. Suppose Diesing were just a volunteer and wasn't paid. Would that make a difference? Why?

95. Suppose it were against the law to leave one's post and only a few men besides Diesing did it. Should Diesing be punished? Why?